



NICHOLAS MEAT INFORMATION BRIEF

Water Quantity and Quality

The quantity and quality of water is important to everyone in the community. Water is also crucial to all food processing facilities, including Nicholas Meat.

Nicholas Meat appreciates the concern about water, and we address some of the more common questions about water quantity and quality below.

It is important to note that hauling sanitary sewage to area treatment facilities will end when the new Sustainable Resource Facility (SRF) is operational and the land application of Food Processing Residuals (FPR) will be dramatically reduced. Sewage and residuals will be treated through the SRF where:

- *Water is reused, minimizing impact on the aquifer.*
- *Digested solids become a nutrient-rich fertilizer that adds organic matter to the soil and reduces the need for chemical fertilizers.*

Water Quantity

Q: Has there been adequate study on the amount (quantity) of water being used by the plant and the impact that it has on the water supply for residents?

A: Nicholas Meat is committed to ensuring there is an adequate water supply for neighbors and the community, as well as to operate the plant. That is why Nicholas Meat is working with the Susquehanna River Basin Commission (SRBC), a third-party organization, as well as a hydrogeological firm to conduct ongoing analysis of Nicholas Meat's water use and its impact on the aquifer. The SRBC is an interstate agency that coordinates the management of water resources in the Susquehanna River Basin. Their mission is to enhance public welfare through comprehensive planning, water supply allocation, and management of water resources.

Nicholas Meat submits quarterly water withdrawal monitoring reports to the SRBC for the wells that are

currently in use. We are collecting monitoring data for all of our wells, Fishing Creek, and certain neighboring wells/springs. These same sources will be monitored during the upcoming pumping tests. Pumping tests are used to estimate the hydraulic properties of aquifers, evaluate well performance, and identify aquifer boundaries.

Nicholas Meat will conduct two separate pumping tests under the supervision of a hydrogeological firm. Prior to the pumping tests we are required to submit an aquifer testing plan which includes groundwater flow data, well data, proposed monitoring sites, and desired pumping rates. The SRBC reviews the plan and comes back to Nicholas Meat with their comments, recommendations and requirements.

Once the SRBC approves the aquifer testing (pumping plan), Nicholas Meat can then perform pumping tests whenever the testing conditions are suitable.

The SRBC oversight for monitoring and testing of water used by Nicholas Meat will help prevent adverse impacts on the quantity of water available. If quantity is impacted, then the company and SRBC will work with those impacted to identify solutions.

The public is encouraged to contact the SRBC online for additional information, as all data they gather is public. Their website is www.srbc.net.

Q: Nicholas Meat applied to use 650,000 gallons a day when applying to the SRBC. If you are going to recycle 90 percent of the water used at the plant through the SRF, why did you apply for this much water?

A: We fully intend to recycle as much water as possible, but we also need to assure we have adequate volume to operate as a backup plan.

When initially applying for water use through the SRBC, we wanted to make sure we had applied for enough water use in case the SRF was not approved, or delayed, due to permitting, or if the system was down for maintenance or repair.

Q: What consideration is taken in the testing and application process to account for potential future drought conditions?

A: Planning for future drought conditions is a priority for the SRBC. The groundwater availability analysis section of the aquifer testing plan, as well as the Groundwater Withdrawal Application, calculates the water availability for a 1-in-10-year drought event. The 1-in-10-year number is used by the SRBC to determine how much groundwater is available for approved uses. The SRBC allows usage based on the 1-in-10-year calculation, the impacts (to other users and the environment), and the amount of need (in this case by Nicholas Meat). The pumping test is being done to ensure there is adequate water for all parties.

Q: Related to quantity of water used, has there been adequate analysis of the long-term impact? Is it sustainable?

A: As noted above, the SRBC monitors use regularly, plans for drought conditions and balances the needs of all users. The system is designed to ensure a sustainable supply through ongoing analysis.

Q: If someone observes "cloudy" or "dirty" water -- is this the result of a dramatic drop in the water table?

A: There are many factors that impact water quality. Cloudy or dirty water can sometimes be an indicator of a collapsed well, which may be the case, but is more likely caused by other conditions including:

- Poor well construction or well aging which allows excess water from the surface to travel down around the casing, carrying sediment into the well.
- Natural changes in water levels, like those from a heavy rain, can flush sediment in, or through, the aquifer (and wells).
- Similarly, a large change caused by lowering of water levels due to pumping can allow sediment to be flushed into wells when turbulent water encounters the sediment.

Water Quality

Q: How is wastewater currently managed at the plant? Where does this discharge go?

A: Beef processing at Nicholas Meat generates two waste streams – sanitary sewage and FPR. There are separate systems in the plant for each waste stream and they are never co-mingled. There are regulatory requirements that stipulate this separation as well as where and how both are managed. Nicholas Meat does not discharge sanitary sewage or FPR into any surface water.

Sanitary sewage is captured in a holding tank and trucked to two different licensed municipal facilities for treatment. This waste is managed in the same manner as municipal sewage. The quantity of sanitary sewage hauled is provided to Greene township monthly and is a public record.

FPR are created daily and provided to farmers to land apply as fertilizer on their fields. FPR application improves soil health by increasing the organic

matter and adding important nutrients.

Farmers who land apply FPR supplied by Nicholas Meat are required to have and adhere to a Nutrient Management Plan (NMP). Under an NMP, farmers are required to maintain detailed records, including application maps identifying setback areas, application quantities, and the crops that are grown onsite. Periodically, soil samples are tested to ensure an appropriate balance between FPR application and nutrient uptake by the crops. Increasingly, FPR is incorporated into the soil using Bazooka Farmstar toolbar equipment. Incorporating FPR into the soil helps reduce odor emissions. In addition this approach increases water infiltration, reduces potential runoff, and improves root development through aeration.

Q: Is FPR tested before application?

A: As part of the Nutrient Management Plan, soil and FPR are tested by an independent laboratory on a periodic basis. FPR is applied at agronomic rates that balance the nutrients in FPR with the nutrient demands of the crops in any given field. This balanced approach

is consistent with what farmers have been doing for generations: planting crops, applying nutrients, removing the nutrients by harvesting crops, and repeating the annual cycle.

Q: What is being done to prevent FPR runoff?

A: The NMP required for all land application establishes setbacks to protect against runoff, and farmers apply the FPR adhering to setback limits. Setbacks are required from private wells, neighboring properties, roads, etc. Additionally, the Bazooka Farmstar toolbar equipment is increasingly used to incorporate FPR into the soil. Incorporating FPR into the soil reduces the risk of runoff.

Q: How do we know there's not human waste in the FPR that is being land-applied?

A: Human waste and FPR are managed in two separate systems. Sanitary waste and FPR are never co-mingled. All sanitary sewage is captured in a holding tank and trucked to separate sanitary treatment facilities. Records of the sanitary sewage is provided to the township.

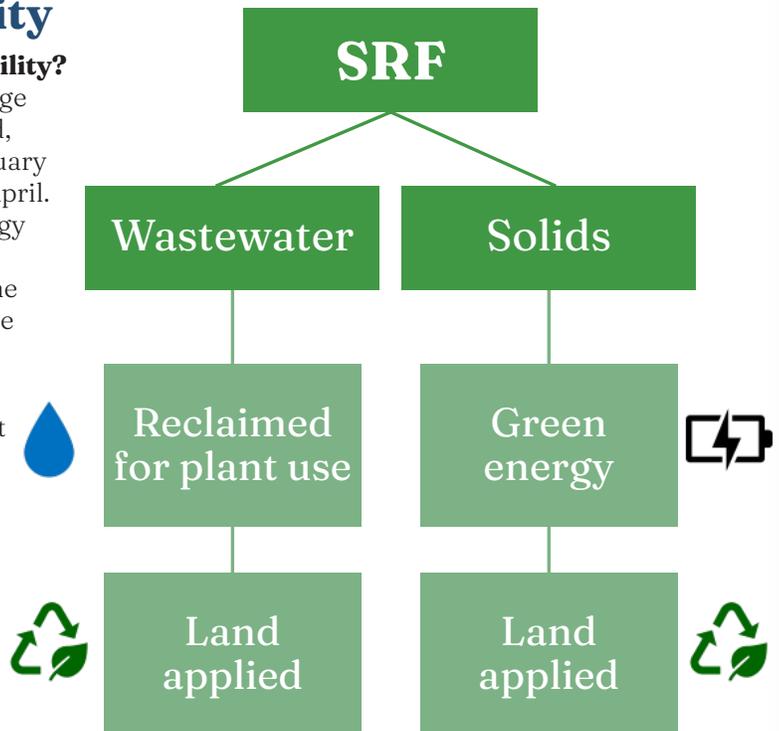
Sustainable Resource Facility

Q: What is the status of the waste treatment facility?

A: The application for a National Pollutant Discharge Elimination System (NPDES) permit was submitted, and after a lengthy review, it was approved in February 2021 and Nicholas Meat plans to break ground in April.

The SRF features award-winning waste-to-energy technology and an advanced wastewater treatment facility. The new system will significantly change the management of wastewater and FPR and deliver the following benefits:

- Anaerobic digesters create renewable energy, replacing fossil fuels, decreasing carbon footprint
- Digestion occurs in an enclosed environment, capturing greenhouse gases and odors
- Water treatment system maximizes water reuse, reducing water demand
- Digested solids become nutrient-rich fertilizer for farmland
- Truck traffic is reduced
- Odor is minimized



MORE DETAILED INFORMATION ABOUT THE SUSTAINABLE RESOURCE FACILITY IS AVAILABLE AT

www.NicholasMeats.com