

Wednesday's Grower Lunch Break (August 5, 2020)

Dr. Jennifer Timmons of UMES presented Mr. Tim Norman, representing Barnes Electric, who gave a talk and answered (a lot of) questions related to poultry house generators, the electric, fuel, and overall maintenance.

Generator Sheds: What's in yours?

Sheds provide weather protection of generator and transfer switch

Engines are susceptible to moisture and dirt

Lifespan of generator is related to proper protection and maintenance

Shed has to stay weatherproof and CLEAN

Also must allow for generator to stay cool

Directing fresh air over the radiator through intake louvers keep gen. and electric cool when generator runs, having hot air pushed out through exhaust louvers

Make sure there is no growth on outside of louvers prohibiting air flow

What you have in the room and what you use it for: NO debris, NO coolers, not a storage room

Radiator needs room and air flow around it

- Pay attention to what is in the room
- Nothing loose and nothing that takes up a lot of space in the room
- In HOT or humid weather, leave door open part of the time to let air in
- A meeting attendee shared a shed fire story that 3 generator houses were used as storage and weren't very clean – those things combusted

Fuel Storage:

200kw or over – 1,000 gallon tank; 150kw – 500 gallon tank (in last 4 years, fuel tank sizes have increased)

Store inside or outside. Tim suggests inside to protect from temperature changes that may create moisture accumulating in tank, creating condensation and algae growth

Can you clean your fuel in tank? Or should you leave undisturbed?

Tim suggest draining a gallon – see if there is water or algae (black slime)

There is a drain plug at the bottom. If water or algae present, consider having it cleaned

Fuel polishing can be very expensive

Fuel additives can be helpful and recommend additives that have cleaners to prevent algae

Cleaner injectors burn cleaner (making more efficient)

Fuel source/company can automatically fill continuously

If they are adding little each time, gauge may be stuck – need to check

If you're dealing with 275 gal tank, fuel line to generator should be 6-8" above bottom of tank

"Always expect the unexpected – the weirdest stuff happens on poultry farms!"

Dust from farm and poultry houses can be detrimental

MAINTENANCE:

Fuel filters – have multiple spares

Storage tank – watch for moisture

Louvers – air flow – is there growth around the outside? Replace with poultry netting if not getting enough air flow

Switch – Emergency Manual Override bypass switch you can start generator even if it's been damaged by lightning or otherwise is malfunctioning

Surge protectors: main service disconnect to breakdown largest surge; surge protector breakdown a little more; built-in surge protection on controller. Recommends transfer switch. Auto transfer switch. Controller surge protector

Blades Use a flashlight with unit off to look for dust buildup. Best way to clean:

Don't blow out – may damage coils

Use brush and possible degreaser or cleaner. Note some cleaners are harsh to aluminum, be very careful choosing cleaners

FRONT OF ENGINE:

- Check engine and harnesses – examine to see if mice are chewing on (winter especially)
- Check wiring and connections for corrosion
- Check fuel lines – dripping and connections
- Oil
- Air filter – white or lite gray – if discolored, replace it bc this can make motor run hot
- Block heater – thermostatic control should not be running if it's hot outside
If it hasn't shut off, have someone look at
- Batteries – connection corrosion white green gray should not be present
- Loose connections? Tighten back up
- If one is overtaxed right now, especially since hurricanes are going through, and with this heat, one thing in the future = load bank will help prevent failures
- Cooling of the system because of summer

Generator attached to engine:

- Bolts – make sure they aren't loose
- Rubber insulators – make sure not worn or loose
- If you have high temps, check oil pressure

Alarm:

- Before you reset, Tim suggests finding out why it was set off – it may override the real issue
- Communication – reset
- Bypass switches – if you can't get your alarm to shut off, it could be a bad sensor, but it may be serious – check first

Make sure Generator is off and check:

- Older units may have exhaust pipe laying on wood (no thimble) through the wall. Definite Fire Hazzard. Look for melting and loose wires
- Aluminum wire can loosen from heat/cold
- Tighten lugs every 2 years
- Antifreeze no more than 1/4" below top (newer models may have 1" below top)
- Get a flashlight and shine through radiator
- Use 2"x4" open shutter to see air through the front
- Engine: wiring – look for anything has been chewed; corrosion; leaks (fuel/damp spots) at fittings, hose, oil
- Air filter – shine white light. Can be buildup of dust, dirt
- Check block heater – make sure nothing is loose
- Battery – check connections, terminator for corrosion
- Run under load for four hours during the summer to lubricate seals, gaskets

CONTACT POWER COMPANY if you are adding more fans or equipment – means more load on generator – performance can be affected. WHEN ADDING EQUIPMENT TO YOUR ELECTRIC, evaluate electric service generator capacity

Pull Tube: that pulls up fuel for generator – is it long enough? Drop Tube? If checking hose, put back together and lubricate fittings.

We would like to thank Tim for his time and expertise. His contact information is as follows:

Tim Norman of Barnes Electric

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Cell: 410-463-2834

Office: 1-866-780-5800

SEE WHAT'S COMING UP





CAFO Notice of Intent Assistance Workshops

The University of Maryland Extension, will be available to help poultry growers fill out their Notice of Intent to renew their CAFO permit at two workshops.

When: **Tuesday, August 18, 2020**
Time: 9am to 2pm
Where: Queen Anne's County Extension Office
Address: 505 Railroad Avenue, Centreville, MD 21617-1138

When: **Friday, August 21, 2020**
Time: 9am to 2pm
Where: Lower Eastern Shore Research and Education Center
Address: 27664 Nanticoke Road, Salisbury, MD 21801-1648

Bring your NOI with you and fill out as much as you can prior to arriving. Also, please have your CNMP and Nutrient Management Plan.

Because of COVID-19, this event will take place outside, face masks must be worn and social distancing rules must be observed. We will have tables set up outside the office to help you complete your form. Additionally, we request that participants wait in their vehicle until there is a space available for them at one of the tables.

The deadline to submit an NOI for coverage under the New AFO Permit is September 6, 2020.

Contacts: Jon Moyle, Poultry Specialist, 443-754-0539, jmoyle@umd.edu
 Jenny Rhodes, Extension Educator, 410-310-0103, jrhodes@umd.edu
 Maegan Perdue, Associate Agriculture Agent, 443-523-4389, mperdue@umd.edu

This workshop is open to all. ****If you need special assistance, please let us know two weeks before the date.**

The University of Maryland Extension programs are open to all and will not discriminate against anyone because of race age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, or national origin, marital status, genetic information, or political affiliation, or gender identity and expression.

NEXT GROWER LUNCH BREAK IS WEDNESDAY, AUGUST 19, AT NOON

Topic: Emergency Preparedness

Register at: <https://umd.zoom.us/meeting/register/tJ0kfuyhqjsgGNzp8wlhemiV6PeHRsJpxntO>

If you would like to **sponsor/host/present** at a future 1st Wednesday of the month Grower Lunch Breaks, please contact one of our Extension Team Members for available dates and topics. They will then direct you to the following Eventbrite website: <https://www.eventbrite.com/e/grower-lunch-break-sponsorship-and-host-page-tickets-114425142682>

Jon Moyle, jmoyle@umd.edu

Georgie Cartanza, cartanza@udel.edu

Jenny Rhodes, jrhodes@umd.edu

Maureen Duffy, duffy@dpickicken.com

Jennifer Timmons, jtimmons1@umes.edu

Sheila Oscar, soscar@umd.edu

On September 2 - Impact Poultry Products' Brad Belo will be speaking about Bacteria Litter Amendment IMPACT-P (NA) – "The Litter Vaccine"



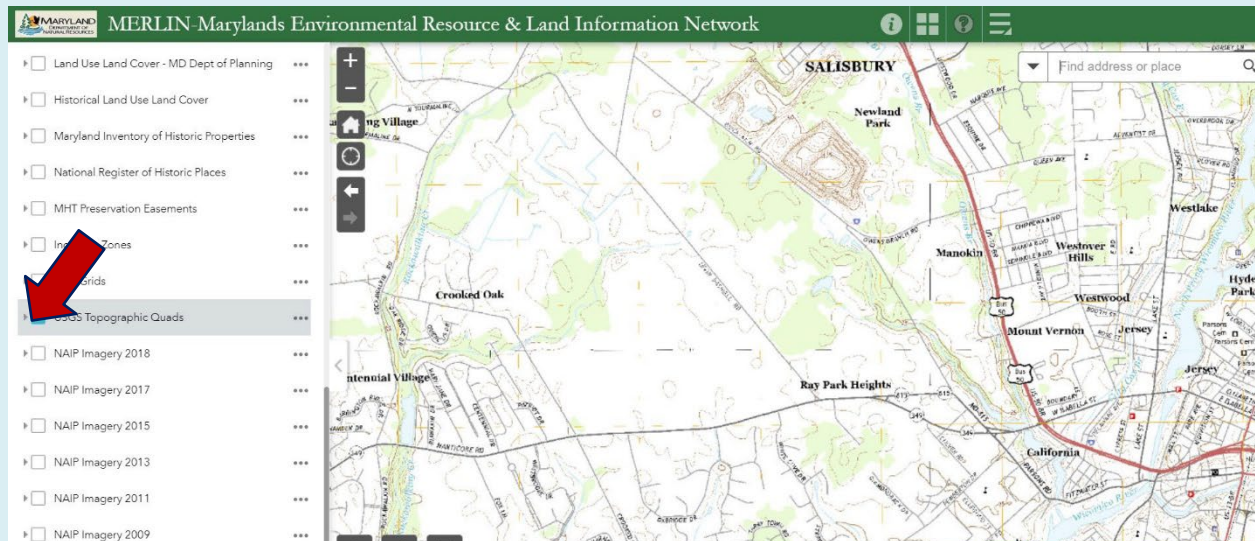
In case you still need it:

- **Topographic Map:** Jon Moyle put together [instructions](#) or see below
- **Water Code 12 Digits:** (Second section of CNMP) He provided [instructions](#) on how to get MD 12-Digit Watersheds or see below

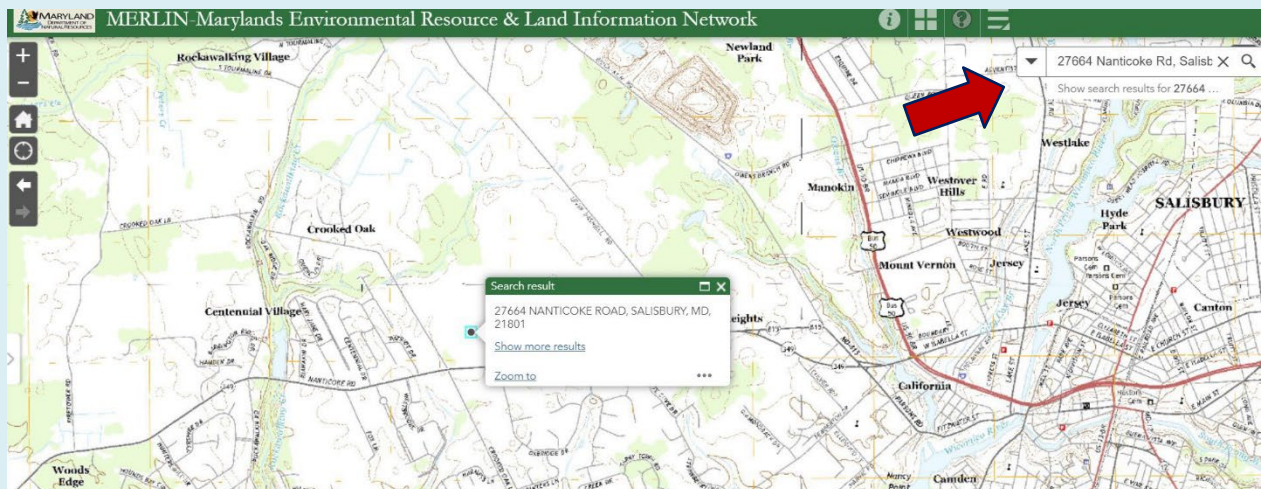
Topo Map

Go to this website <https://gisapps.dnr.state.md.us/MERLIN/index.html>

Scroll down the left column until you find “USGS Topographic Quads”. Scroll back up and click on "Parcel Boundaries".

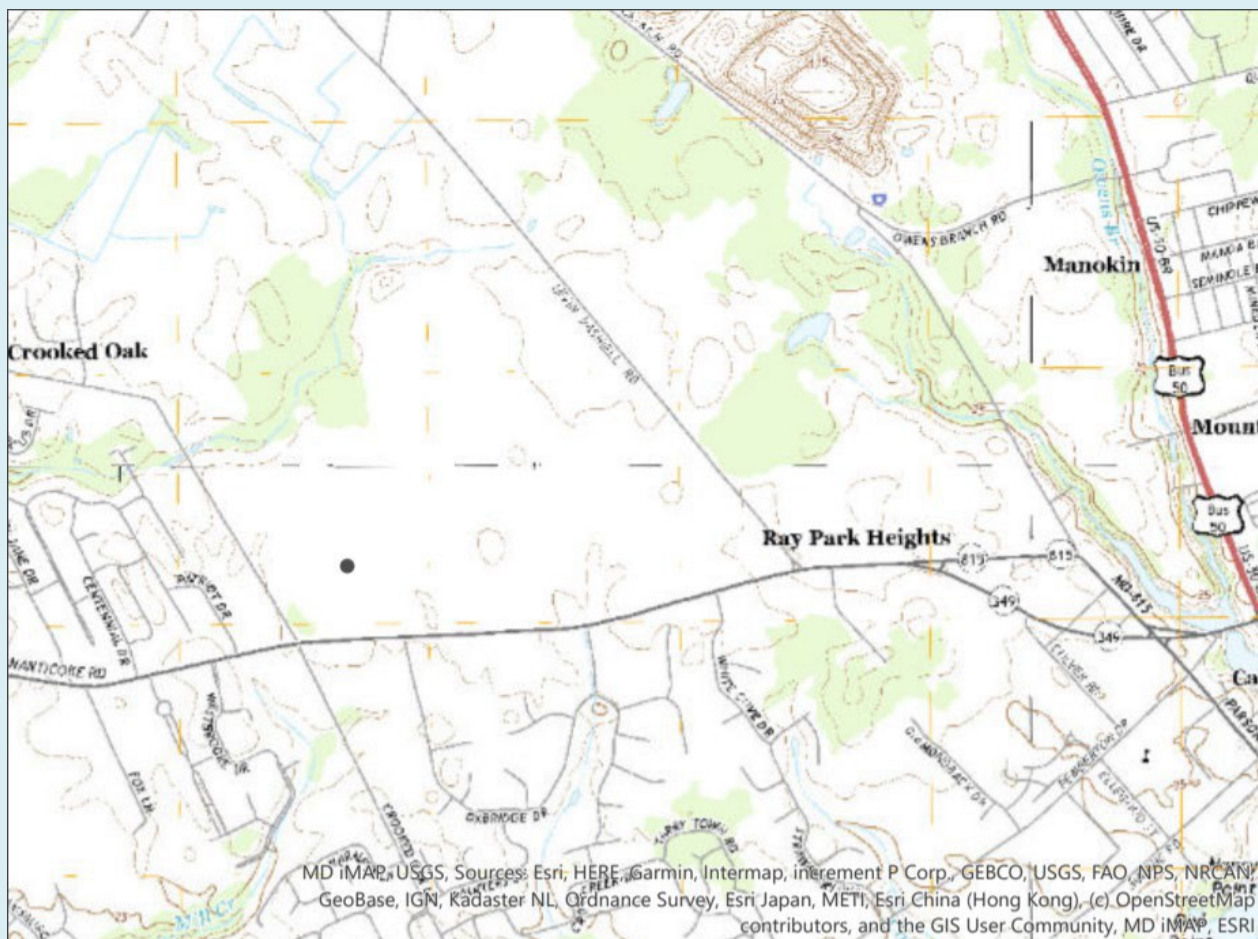
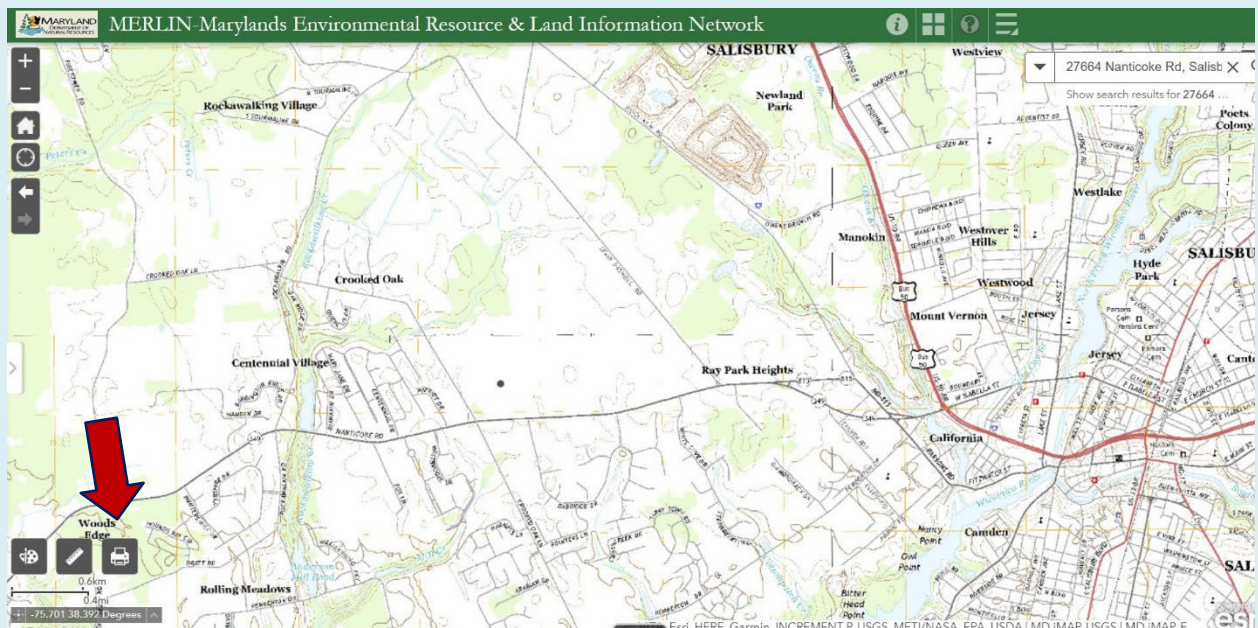


Next enter the address of the farm address in the “Find address or place”



You can then adjust the level of zoom, by scrolling with the wheel on your mouse.

Once you have the area you need you can print the map by clicking the print symbol or copying the screen. Their print icon will open a pdf, click on and print the pdf.



Your Nutrient Management advisor will also be able to get your topographic map.

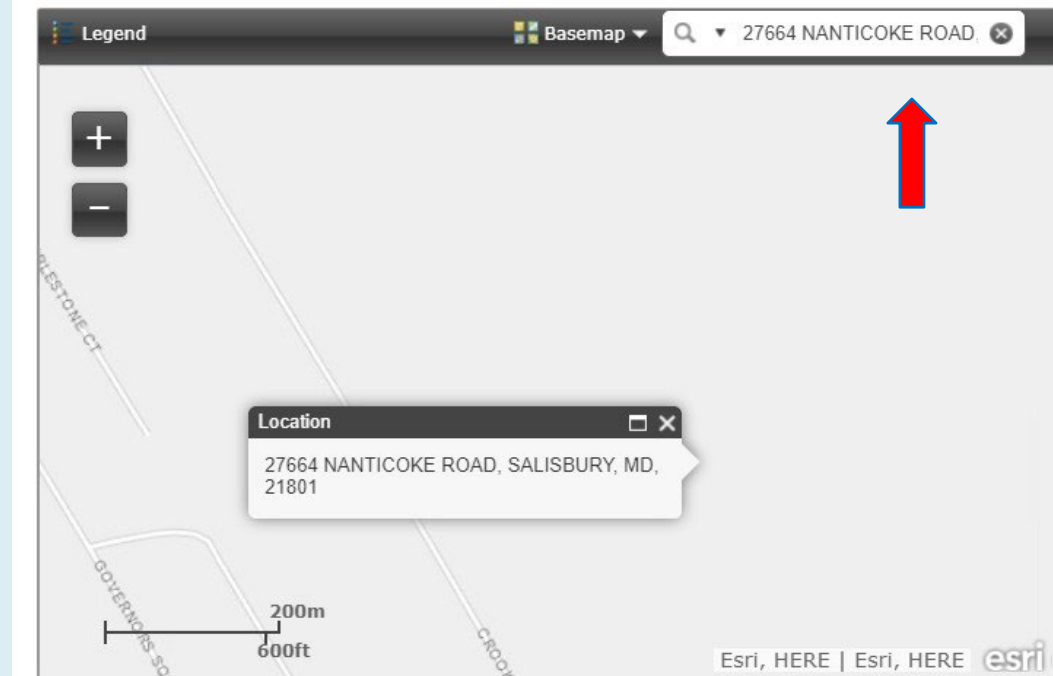
How to find your Maryland 12-Digit Watershed

Start by entering this website

<https://mde.maryland.gov/programs/Water/TMDL/DataCenter/Pages/12DigitWatershed.aspx>

Map of Maryland's 12-Digit Watersheds

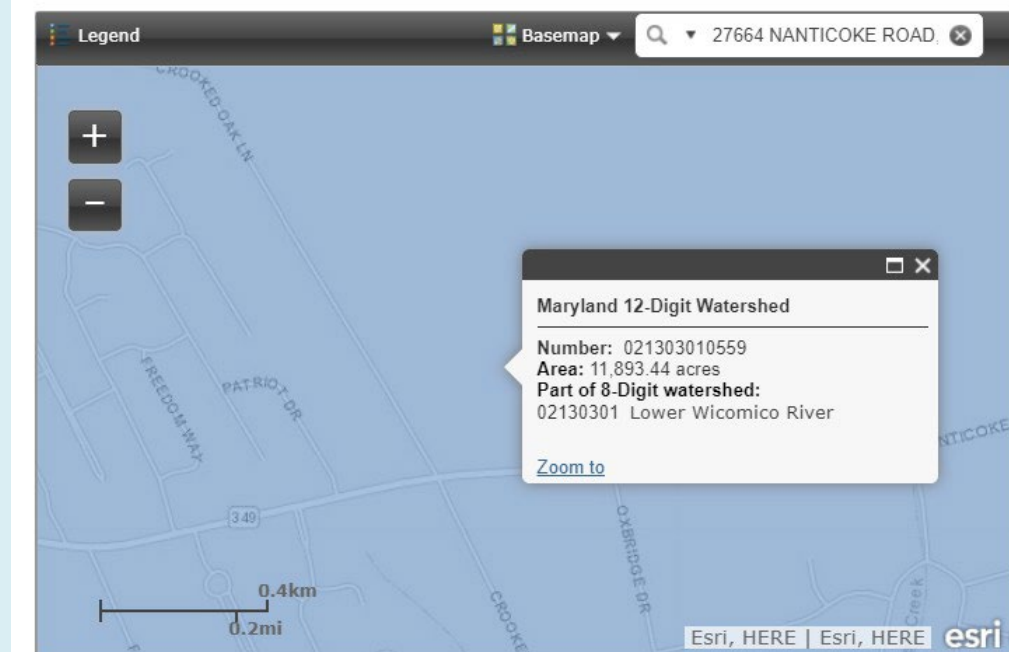
Please note that it may take several seconds for the map to load and refresh.



Enter your address in the Search box

Zoom out a click or two and then click the map over your farm and it will show the watershed number

Please note that it may take several seconds for the map to load and refresh.



[View Larger Map](#)

[Download Shapefile](#)